



UNITED STATES DEPARTMENT OF COMMERCE
Pat nt and Trademark Office

Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
-----------------	-------------	----------------------	---------------------

09/365,356 07/30/99 JIANG

T 660073.774

EXAMINER

MMC1/0801

EDWARD W. BULCHIS, ESQ.
DORSEY AND WHITNEY LLP
U.S. BANK CENTRE, SUITE 3400
1420 FIFTH AVENUE
SEATTLE WA 98101

BEREZNY, N

ART UNIT

PAPER NUMBER

2813

DATE MAILED:

08/01/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trad marks

Office Action Summary

Application No.

09/365,356

Applicant(s)

JIANG, TONGBI

Examiner

Nema O Berezny

Art Unit

2813

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 April 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 and 38-49 is/are pending in the application.
- 4a) Of the above claim(s) 46-49 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-18 and 38-45 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Election/Restrictions

Newly submitted claims 46-49 are directed to an invention that is independent or distinct from the invention originally claimed for the following reasons: said claims are a method of making a semiconductor device package; elected claims are drawn to a semiconductor device product.

Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claims 46-49 are withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

Claims 1-8, 10-18, 38-39, and 41 are rejected under 35 U.S.C. 102(e) as being anticipated by Mitchell et al. (6,169,328). Mitchell discloses a semiconductor package, comprising: a semiconductor die (Fig.1 el.120) having a bond pad (el.130) on a first

Art Unit: 2813

surface; an external terminal (el.140), including a solder ball (Fig.1 no #); a flexible, compliant interposer (el.100; col.4 lines 58-61; col.5 lines 1-6) with an electrical interconnect (el.150) coupling the bond pad of the die to the external terminal on the interposer surface opposite the die attach surface (Fig.1); a plurality of pieces of single layer adhesive, elastomeric film (Fig.3A el.110; col.5 lines 1-6) disposed in between the die and interposer to adhere the die to the interposer die attach surface; and an encapsulating material (el.170) substantially filling the regions remaining in between the die and the interposer. Mitchell also discloses a plurality of pieces of adhesive film comprising: a first and second adhesive layer adhered to a carrier layer, and adhered to the die and die attach surface (col.9 lines 54-58). Mitchell also discloses pieces of adhesive film positioned at a right angle with respect to each other (Fig.9).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 9, 40, and 42-45 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mitchell et al. as applied to claims 1-8 and 38-39 above, and further in view of Sakumoto et al. (5,891,566). Mitchell does not disclose a plurality of pieces of adhesive film interposed between the die and the die attach surface, comprising strips of compliant adhesive film positioned in parallel along a longitude of the die, positioned

Art Unit: 2813

at a right angle with respect to each other, and at least one of the strips comprising a compliant carrier layer and at least one adhesive layer adhered to the compliant carrier layer. Sakumoto discloses said plurality of pieces of adhesive film (Fig.4; col.3 lines 9-19; col.5 lines 30-33). Therefore, it would have been obvious to a person skilled in the art at the time of the invention to use the adhesive tape of Sakumoto with the semiconductor package of Mitchell, in order to maintain good adhesion during fabrication, between semiconductor package parts which have different coefficients of thermal expansion (col.7 lines 20-34).

Response to Arguments

Applicant's arguments with respect to claims 1-18 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nema O Berezny whose telephone number is (703) 305-3445. The examiner can normally be reached on M-F 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles Bowers, Jr. can be reached on (703) 308-2417. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7722 for regular communications and (703) 308-7722 for After Final communications.

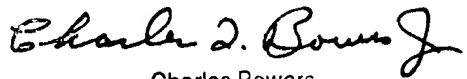
Application/Control Number: 09/365,356

Page 5

Art Unit: 2813

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

NB
July 26, 2001



Charles Bowers
Supervisory Patent Examiner
Technology Center 2800